

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 20. (Canceled)

21. (Previously Presented) An apparatus comprising:

hardware configured to provide at least one virtual clock configured to generate a virtual schedule associated with at least one message from at least one of a plurality of modules configured to transmit the at least one message on a bus; and

the hardware configured to provide an actual schedule associated with the at least one of the plurality of modules wherein the actual schedule relates to a scheduled time of transmission of the at least one message having at least one allocated time slot;

wherein the actual schedule associated with the at least one of the plurality of modules is set in relation to the at least one virtual clock;

wherein the at least one message is transmitted on the bus in relation to the actual schedule.

22. (Previously Presented) The apparatus of claim 21 wherein the actual schedule relating to the time of transmission of the at least one message is set at a time before a time associated with the virtual schedule.

23. (Previously Presented) The apparatus of claim 21 wherein the at least one virtual clock is configured to define a plurality of time slots.

24. (Previously Presented) The apparatus of claim 21 wherein the at least one of the plurality of modules is configured to use at least one reference to base a time in relation to a virtual clock.

25. (Previously Presented) The apparatus of claim 21 further comprising a plurality of time slots wherein the at least one message is configured to be transmitted in at least one of the plurality of time slots adjacent to the at least one allocated time slot.

26. (Previously Presented) The apparatus of claim 25 further comprising a receiver configured to receive and interpret the at least one message.

27. (Previously Presented) The apparatus of claim 21 wherein the at least one module further comprises an actual clock configured to generate the actual schedule and wherein the actual clock is set in relation to the virtual clock.

28. (Previously Presented) The apparatus of claim 21 further comprising a collision detection device configured to interact with the virtual clock and send at least one of a plurality of messages at a time when at least one time slot associated with the system is free of messages.

29. (Previously Presented) The apparatus of claim 21 wherein the length of the at least one allocated time slot is size larger than the average length of the at least one message.

30. (Previously Presented) The apparatus of claim 21 wherein the actual schedule is generated in response to at least one of the plurality of modules being configured to transmit at least one of a plurality of messages in relation to the virtual schedule.

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31. (Previously Presented) The apparatus of claim 21 wherein the at least one allocated time slot is configured to accommodate bit stuffing.

32. (Previously Presented) The apparatus of claim 21 wherein the apparatus comprises a controller-area network.

33. (Previously Presented) A method for transmitting at least one message on a bus connection, the method comprising:

generating a virtual time schedule associated with the at least one message wherein the virtual schedule relates to a time of transmission of the at least one message;

providing at least one time slot for transmission of the at least one message on the bus connection;

generating an actual schedule associated with at least one of a plurality of modules;

setting an actual clock associated with the at least one of the plurality of modules in relation to a virtual clock associated with the virtual time schedule; and

transmitting the at least one message on the bus connection in relation to the actual schedule.

34. (Previously Presented) The method of claim 33 further comprising transmitting the at least one message on the bus connection at a time in accordance with the virtual time schedule.

35. (Previously Presented) The method of claim 33 wherein the virtual clock is configured to generate the virtual time schedule.

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36. (Previously Presented) The method of claim 33 wherein the actual clock is configured to generate the actual schedule associated with the at least one of the plurality of modules.

37. (Previously Presented) The method of claim 33 further comprising transmitting the at least one message on the bus connection at a time in accordance with the actual schedule.

38. (Previously Presented) An apparatus comprising:
means for generating a virtual time schedule associated with at least one message wherein the virtual schedule relates to a time of transmission of the at least one message;
means for providing at least one time slot for transmission of the at least one message;
means for generating an actual schedule associated with at least one of a plurality of modules;
means for setting an actual clock associated with the at least one of the plurality of modules in relation to a virtual clock associated with the virtual time schedule; and
means for transmitting the at least one message in relation to the actual schedule.

39. (Previously Presented) The apparatus of claim 38 further comprising means for transmitting the at least one message at a time in accordance with the virtual time schedule.

40. (Previously Presented) The apparatus of claim 38 further comprising means for transmitting the at least one message on the bus connection at a time in accordance with the actual schedule.